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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/632,056 | 07/31/2003 | Richard E. Staerzl | M09691 | 9967 |

7590 09/07/2006

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| EXAMINER | |
|---|---|
| BELL, BRUCE F | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1746 | |

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/632,056 | STAERZL ET AL. | |
| | Examiner | Art Unit | |
| | Bruce F. Bell | 1746 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1 and 16-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 16-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 16-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Boyd et al (7,015,861).

Boyd et al disclose a an antenna applied to a structure which has a series of conductive and dielectric coatings. A conductive coating backplane is applied to a substrate structure , a non-conductive dielectric coating is applied over the outer surface of the conductive coating backplane and a conductive coating patch, microstrip array or radiating element is applied over the outer surface of the dielectric coating. The pin of a coaxial cable extends through the conductive coating backplane, the dielectric coating and the conductive coating patch, for transmission of a signal from the antenna. See abstract. The antenna can be flush mounted on various types of land, air, and water platforms, including tanks, aircrafts, ships and articles of clothing. See col. 1, lines 20-23. The coating applied antenna can be applied to not only flat surfaces but also on sharp or double curbed platforms such as ships surfaces. See col. 2, lines 12-17. The antenna can be applied to surfaces of aluminum, steel, metal alloys, composite

structures, fiber reinforced plastics, polycarbonate, acrylic, polyethylene, polypropylene, fiberglass, textiles and paper. See col. 2, lines 30-34. The conductive coating backplane and the conductive coating patch, microstrip array or radiating element are formed of an electrically conductive and electromagnetic radiation absorptive coating such as UNISHIELD™ The coating is made of electrically conductive particles which include a combination of graphite particles and metal containing particles and includes a binder of an acrylic, aliphatic or aromatic polyurethane, polyester urethane, polyester, epoxy, polyamide, polyimide, vinyl, modified acrylic, fluoropolymer and silicon polymer or a combination thereof. The electrically conductive particles can be selected from any of graphite particles, carbon nanotubes and metal containing particles or a combination thereof. See col. 2, line 51 – col. 3, line 32. The end of a conventional coaxial connector or cable is inserted through an aperture in the substrate structure prior to application of the conductive coating backplane, the dielectric coating and the conductive coating patch or microstrip array to the substrate structure. The center conductor or pin of the coaxial connector or cable is insulated along its length, except at its tip. See col. 5, lines 27-38. The antenna can also have a protective film applied over the conductive coating patch or microstrip array or radiating element. See Col. 6, lines 42-55.

The prior art of Boyd et al anticipates the applicants instant claims as set forth above. The examiner construes the conductive coating backplane to be the support structure which is connected to surface of the marine vessel or ship and the conductive element to be the conductive coating microstrip array, where the coaxial connector is inserted through the conductive coating backplane, the dielectric layer to contact the

conductive coating microstrip array from the second side. The antenna is considered to be an electrode and this antenna inherently has to be connected to a power supply for the device to work since the device has to work on frequencies. The antenna of Boyd et al does not teach that it is a submersible anode, however, the materials of graphite and the polymers utilized, known as UNISHIELD™ are known for there submersion qualities, since they can be uses in multiple applications and further since these polymers are known for being sealants that would inherently seal the coating to the surfaces that they are in contact with to prevent moisture from contacting the conductors connected to the antenna (electrode). Therefore, since the same materials are used in both Boyd et al and in applicants instant invention, these materials would inherently make the device submersible, absent evidence to the contrary. An aperture is found in Through both the vessel and through the conductor coating backplane and dielectric layers to contact the conductive coating microstrip array which aperture is construed by the examiner to be a cavity. Since the conductive coating microstrip array is made of the UNISHIELD™ material, it appears that this material seals the cavity and blocks the moisture and since this same material is used for the conductive backplane the material is considered to be the encapsulant between the conductive element at said inner reach and is outward of the inner reach with the encapsulant being therebetween. The examiner considers the dam to be the insulative material around the pin of the Boyd et al patent, which insulative material isolated the connection of the conductor to the second face of the microarray. Since the examiner has construed the substrate of Boyd et al to be the ship and it can be seen that there is hole in the ship for

the coaxial cable to go through, this would be considered to be the second hole receiving the conductor and as can be seen the holes in figure 4 of Boyd et al are aligned. Therefore, the prior art of Boyd et al anticipate the applicants instant invention as set forth above.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 16-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 16-26 are vague and indefinite with respect to the support structure being attached to the component of a marine vessel. The attachment of the anode structure does not appear to be a part of the anode and therefore, has not been considered a part thereof, since it does not appear that ship manufacturers would manufacture the anode therewith, but instead would install the anode after the ship was made, which is why the support structure for the anode is necessary. Correction and/or clarification is requested.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB
August 31, 2006

Bruce F. Bell
Primary Examiner
Art Unit 1746